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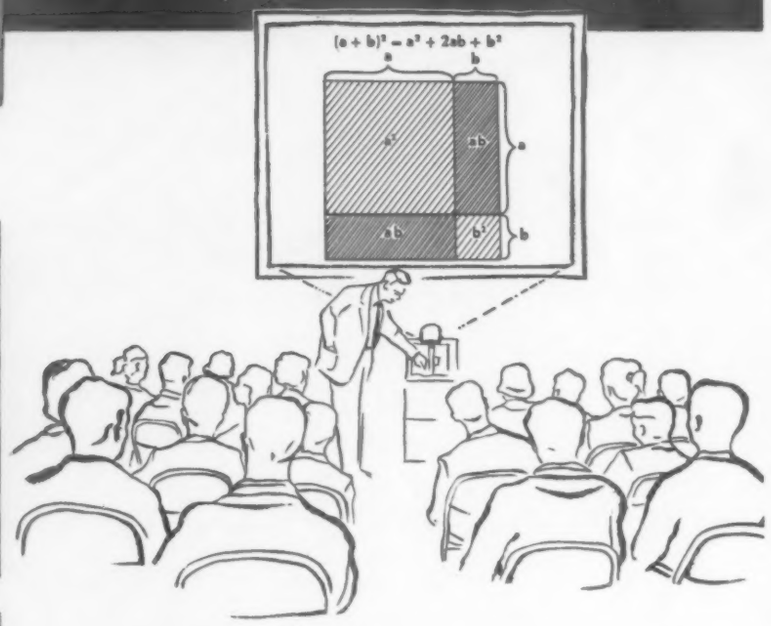

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the EDITOR'S notebook

DAVI Seeks Nationwide Support

HERE ARE THE 1959-60 institutional membership co-chairmen who will canvass all sections of the country to insure strong support for DAVI from colleges, universities, and other non-profit organizations.

An institutional membership costs $25 and brings two copies of all publications (except AVCR which comes singly) plus special mailings sent to institutional members exclusively. It carries voting privileges only if taken out in the name of an individual—that individual then becomes the active voting member.

Otis McBride, director of the audiovisual center at Florida State University and chairman for the southeastern states, says: "The institutional membership permits the entire faculty of the college or university, and particularly the audiovisual and instructional materials personnel, to have closer touch with the national professional organization. It will bring them the most recent developments in the National Defense Education Act, special legislation, research, and literature. At the same time the institution will support DAVI both financially and professionally. I urge your institution to take out a membership, thereby joining hands with DAVI in the promotion and effective use of instructional materials."

Henry McCarty, director of the West Texas Cooperative Audio-Visual Services, and chairman for the western states, sends this message: "Our DAVI institutional memberships are the best professional service we buy annually. You might say DAVI membership helps the busy educator keep abreast of the 'leading edge' of the rapidly developing audiovisual field."

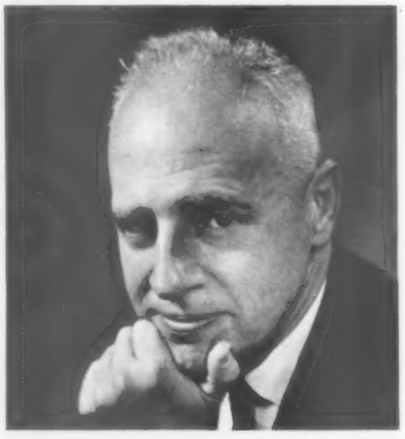
And from Charles Schuller, who with Horace Hartsell, is co-chairman of the northeastern and midwestern states: "The focus of educational thought is undergoing extensive change as educators attempt to adjust today's programs to tomorrow's needs. In this effort DAVI can be of significant help. Here is an organization dedicated, first of all, to good education and, secondly, to its implementation through the newer media of communication. The studies, publications, and activities made available through institutional memberships will be of real interest and value to faculties and education students everywhere."

McBride McCarty

Schuller Hartsell

Dr. Schuller is director and Dr. Hartsell associate director of the audiovisual center at Michigan State University.

Meet Louis Shores



Dean Shores

" 'Not by books alone,' " writes Dr. Shores, "do libraries disseminate the good and great ideas, but through pictures and objects, still projections and motion pictures, disc and tape recordings, radio and television and community resources. Consequently, since these formats are also library materials, librarians must be fully informed about the evaluation, selection, and use of all the media of communication whether they come in hard covers or not.

"A membership in DAVI will bring AUDIOVISUAL INSTRUCTION, now an indispensable selection aid in libraries."

Dr. Shores, dean of the Florida State University Library School who has been plugging library memberships for DAVI the past three years, continues to serve as chairman for 1959-60. He can offer three choices:

Library Membership A: The institutional membership for $25 which brings the extra copies and special mailings.

Library Membership B: A $5 membership especially designed for small libraries which brings AVI and the DAVI service packets along with a library discount on other DAVI publications.

Library Membership C: The individual membership for $5 or $8, which simply makes the librarian a regular DAVI member.

It is through the leadership of its membership chairmen plus the efforts of its 4000 members that DAVI this year hopes to increase its strength, both numerically and through quality of participation.

Kickoff in Carolina

The DAVI membership campaign got off to a flying start in South Carolina when President Bell addressed two sessions of a state audiovisual conference in Columbia, September 17 and 18. Under the leadership of J. K. East, newly appointed state supervisor of audiovisual education for South Carolina (and also DAVI membership chairman for the state), this initial statewide conference attracted more than 200 superintendents, principals, supervisors, and audiovisual directors. John O. Fritz of the University of Chicago made a presentation on the production and use of AV materials. Mr. East writes that he hopes to hold a similar conference in the spring and that such events will soon be established in South Carolina on an annual basis.

AVI Story Inspires Critic

AVI readers will want to look at the article, "Professors and Practitioners," by Roy Harvey Pearce in the October issue of *Educational Leadership* (page 35). Professor of English at Ohio State University, the

author was a participant in the "interaction" seminar conducted by the NEA last February. His essay was inspired by a report of that seminar in the March 1959 issue of AVI, written by the assistant editor of this magazine, who, Professor Pearce says, "as a good reporter surely knows her organization's sense of the meeting." It is the "educational provincialism" reflected (perhaps unconsciously) in this report which Professor Pearce objects to as typical of educationists in their dealings with academicians.

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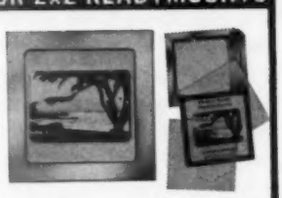

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K. C. Rugg Dies

"Casey" Rugg

The DAVI national office was shocked and saddened to learn of the untimely death of K. C. Rugg early October 8. Dr. Rugg who was 48 had passed a complete physical examination the day before in preparation for a two-week Naval Reserve tour of duty. He was buried October 12 at Wheatland, Wyoming, his boyhood home.

The national staff had the opportunity to visit with "Casey" a week before his death when he spent the better part of a day in this office putting finishing touches on a publication for AVCOPI. The booklet, which was financed through Title VII, will be released this month.

At the time of his death Casey was operating director of the audiovisual center at Indiana University where he handled a budget of some $1,200,000 this year. His loss to the center will be felt keenly. L. C. Larson told the national staff that Casey's contribution over the past 10 years has been invaluable—not only in terms of his own industry, loyalty, and competence, but also because of his numerous professional friends and contacts throughout the audiovisual field. Casey will also be missed in NAVA where he contributed unstintingly each year to the Audiovisual Institute for Selling conducted at Indiana University as part of the NAVA annual meeting.

Friends in DAVI who wish to pay tribute to his memory may send contributions to a scholarship fund in care of the IU Foundation at Indiana University.

Photo Credits

Stratovision photo page 261 by Westinghouse. Pages 262-63, courtesy of the author. Pages 268-69, courtesy Helen Seel—fountain and view of Cincinnati from bridge by Cincinnati Convention and Visitors Bureau, Museum of Natural History by Brand Studios.

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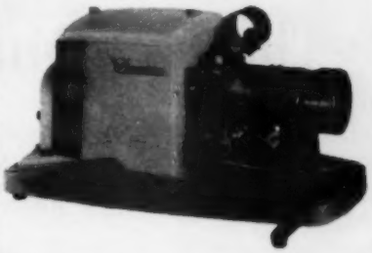

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NETWORKS—

The ETV Multiplier

A Conference Summary
by Alice Finstad

ARE REGIONAL AND STATE networks feasible in educational broadcasting? If so, what is their proper role? Where are networks being employed now? What effect do networks have on the educational community? On programming? How much do networks cost and how do you finance them? Are there technical limitations? What are the legal booby traps?

These and other questions signifying the ramifications of a fast-growing area of modern education were treated in the Conference in Washington, D. C., conducted by the National Association of Broadcasters in September under a contract with the U. S. Office of Education (Title VII, B, National Defense Education Act). This was not a buzz-session "interaction" type conference. Some 30 experts reported in prepared speeches on the various aspects of broadcast TV and radio. Publication of these speeches was stated as the prime objective of the Conference.

Briefly, what emerged from the 2½-day discussions was a heterogeneous structure of actual and proposed networks throughout the country, apparently springing from indigenous needs and ranging in complexity from the exchange of kinescopes reported out of the Far West to the proposal (pending FCC approval) for an ETV network connecting 309 colleges and universities in 16 Southern states. As opposed to this picture are the extensive plans now in existence for networks in every state and region, which, if they materialize, will in the near future link together all educational television stations in the United States.

These plans were revealed in a session where Hartford N. Gunn, Jr., general manager of Stations WGBH-FM-TV, gave the regional overview for New England; William Bowden, TV coordinator for the Southern Regional Educational Board, for the South; Loren B. Stone, KCTS-TV, University of Washington, for the Far West; Jack McBride, NAEB vice president, for the Midwest; Lawrence Frymire, WKAR-AM-FM, Michigan State University, for the Midwest (radio); John Schwarzwalder, director, Twin City Area Educational Television Corporation, a regional study in Minnesota; Kenneth Christiansen, director of television, University of Florida, a close-up of Florida; Richard B. Hull, director of radio and television broadcasting, Ohio State University, a close-up of Ohio; and William G. Harley, NAEB president, a close-up of Wisconsin (radio).

(A panel of engineers appearing the second day of the Conference demonstrated to the satisfaction of everyone that technical problems were unlikely to be a limiting factor, whatever the degree of networking. The role of video tape loomed large in these discussions, as it did throughout the Conference.)

The South Moves Ahead

To date, New England has the only regional network in operation. The Southern states, however, seem to have progressed the most rapidly in state networks and will, when linked together in the 16-state southern regional network, represent an important slice of the nation. Alabama, Florida, and Georgia have achieved almost 100 percent coverage. The first two operate under an established state television authority, as does Oklahoma in the Southwest. The pattern in many of the other states seems to be one of leadership exercised by cooperatively run educational television stations which, with state department backing, has resulted in proposals for state networks. Michigan is one example, North Carolina another. Networking is not a matter of size or elaborate organization, as Dick Hull pointed out. Any time two or more stations, or even two or more schools, are linked together, he said, you have in effect a network.

Clifford G. Erickson, dean in charge of television at Chicago City Junior College, told the Conference of the full two-year program offered for credit over WTTW by his institution. The pattern for future growth has already become evident in a cooperative arrangement with Morton Junior College whereby the latter pays tuition for viewers in the Cicero area. These television courses, which permit home viewers to earn an Associate in Arts degree with a minimum of face-to-face conferences, were presented to the Conference as one type of educational fare feasible over network TV.

Louis Lyons, who with Hartford Gunn represented WGBH-TV, gave the Conference some idea of how rich the offerings of a community station can be when the station is fortunately located as is the Boston one, and when the program is selected with care and imagination. WGBH-TV draws from such institutions as MIT, Harvard, Brandeis University, and Boston College. Authors, visiting scholars, and top news commentators are often tapped, and the Boston symphonies and newspapers cooperate. Dr. Lyons, news commentator for WGBH, is himself curator of the Nieman Fellowships.

Following Dr. Lyons on the program, E. W. Ziebarth said: "Educational television has demonstrated the

availability and producibility of valid, sound, and genuinely important materials, from which now, not next year, or five years from now, but *now* selections can be made which would justify network transmissions." Dr. Ziebarth, who is dean of summer sessions at the University of Minnesota and consultant for the Midwest Radio and Television Corporation, also sees an impending role for network TV in teaching certain esoteric university courses, areas in which, he said, even the "most distinguished institutions have no business trying to operate independently in these times of fabulously costly equipment and instruction."

Budgeting and ways of financing were an interesting, if inconclusive, part of the Conference. John Klindworth of K & M Electronics Company, Minneapolis, gave a detailed estimate of an NAEB region on the Midwest prairies. Involved was a microwave system using two-way hook-ups, one-way relays, and off-the-air pickups. Mr. Klindworth's total figure for 63 stations in six states was $2.26 million. This was an "outside figure" making no allowances for bargains, finds, steals, or unusual discounts. In contrast Mr. Hulburt, an operator with an eye to the main chance, told how the Alabama system of three stations and 12 microwave units had been built for $1 million. His outlay now, Mr. Hurlburt said, had been estimated at $10 million by a commercial operator. A participant in the audience paid tribute to Mr. Hurlburt's talents, but commented that he hoped his account would not leave the impression that it is possible to "put together a network with baling wire."

How Do You Finance a Network?

Hartford Gunn pointed out that there are as many ways to finance a network as there are to finance an individual station—local and national foundations; local and state organizations rooted in the community, such as fraternal organizations; individual subscriptions and contributions, public school funds, college and university treasuries, state legislatures, federal government sources, and, though he said the networks hate to resort to it, assessments from existing stations. He also gave some pointers on how to make fund raising presentations. If state groups are approached, it is well to have your plan encompass the entire state. It is also wise to have alternate, less expensive plans, he said.

Mr. Gunn also made an interesting observation about programming. Commenting on the early mistakes studios made in thinking that network programming was merely a matter of exchanging the best programs, he said: "This of course will work, but it is a great mistake because a live, interconnected network presents a wholly new dimension in programming which should be explored and exploited to the utmost. The network should free the program and production staff of an individual station from the necessity of producing hour after hour of programming on small budgets in order to fill the broadcast day. The staff, then, can create a new schedule incorporating the best material of the network and can concentrate its attention and resources on (1) producing programs focused on local needs and (2) producing major programs for the network."

It was inevitable that networking by its very nature would draw words of caution from the educators present, particularly upon their contemplation of the "stratovision" experiment reported to the Conference by Philip Coombs of the Fund for the Advancement of Education. (See page 261 for complete story.) Dean Ziebarth sounded the first note when he said: "If the mass media are indeed the great Extension of almost everything, then it is up to us to look more closely and critically than our colleagues have so far done at what is being extended. . . ." Dean Ziebarth contended that it is the source, not the pipeline principle, which needs examination.

Educators Voice Varied Concerns

There were other concerns. Harold Wigren, NEA's ETV consultant, was concerned with "team teaching." He referred to the difficulty even on the local level of keeping the television and classroom teachers working together every step of the way. This problem, he feared, would be greatly augmented if the two were separated by hundreds of miles.

The Very Reverend Celestin J. Steiner, S.J., president of the University of Detroit, worried about maintaining the "right to be different." The very existence of his university, he said, is based on the fact that it is different. This difference comes from the philosophical and theological viewpoints of those who teach, and the students (non-Catholics among them) pay higher tuitions to go there because of this difference. If government funds become available to ETV networks, then what becomes of this difference? Could the University of Detroit continue to broadcast its theology and philosophy? Father Steiner thought perhaps the "control" problem in state and regional networks could be avoided by the use of video tape.

The "effects of state and regional networks on the educational community" were also considered by Sam H. Moorer, representing ASCD; Edwin P. Adkins, Continental Classroom; O. C. Aderhold, Land Grant Colleges; Finis Engleman, AASA; Richard Hull, North Central Association; and A. W. VanderMeer of Pennsylvania State University. The latter evinced some impatience with the widely accepted view that ETV must prove itself in the framework of the existing curriculum. "It is the obligation of educational leaders to lead," he said, "We have an obligation to try out ETV in the ways it can succeed." Edgar Fuller, executive secretary of the Council of Chief State School Officers also appeared on this panel. (See page 258)

The broadcasters (among them, Dick Hull, John Schwarzwalder, John F. White, and NAEB President William Harley) felt the question of control had become a fixation with educators. Why worry about it, when each classroom teacher exercises the ultimate in control simply by turning the switch? Look at the record, they said. Radio has a long record of responsible operation, and who has yet been able to cite a single transgression in the case of TV's shorter history? Who operates ETV stations, they asked, pointing to Boston where the presidents of Lowell Institute, Harvard University, and MIT are on the board.

Educators are now and always will be in control of educational broadcasting, Mr. Harley assured departing conferees.

This article is the complete text of an address given by the author to the NAEB conference reported elsewhere in this issue. Dr. Fuller, who is executive secretary of the Council of Chief State School Officers, prefaced his remarks with this statement: "The Council of Chief State School Officers has policies favoring the development of educational television. In more than one-half the states there is legislation concerning ETV and many chief state school officers are active in this field. The opinions expressed here, however, go beyond the general policies adopted by the Council, so they must be regarded as personal."

ALL OF US IN EDUCATION are committed to improve it in every possible area: the curriculum; the content of courses of study within the curriculum; the quality of the teachers; the physical facilities; and especially the subtleties of the teaching—learning process that cannot be tested by measures of how many facts have been learned and retained. To the extent ETV helps improve total learning in the truest sense of learning, it is justified; to the extent it does not do this, it is not justified.

Educators will eventually insist upon objectivity in rating ETV in terms of improvement of learning. Will a film do the job better? If so, we should use the film. Is radio, that half-forgotten medium that is here along with and in spite of television, being used as it should be used in the schools? If not, why not? Is it possible that some things we may try to do through television can be done better through books or slides? Or through other means? No vested interest in using television should obscure an objective approach to the best teaching aids, whatever they may be.

Let me illustrate specifically what I mean in implying that educational progress may not always be forwarded by ETV. Recently, the Council of Chief State School Officers prepared a *Purchase Guide* for state and local school systems throughout the country. This *Guide* describes equipment and materials recommended for use to improve instruction in the sciences, mathematics and modern foreign languages. Staff and advisory experts representative of the Modern Language Association recommended use of electronic installations of various complexity for teaching modern foreign languages, with the most complex ones designated as language laboratories. They did not recommend television for this purpose, since audio is better when used alone in beginning the learning of a new language.

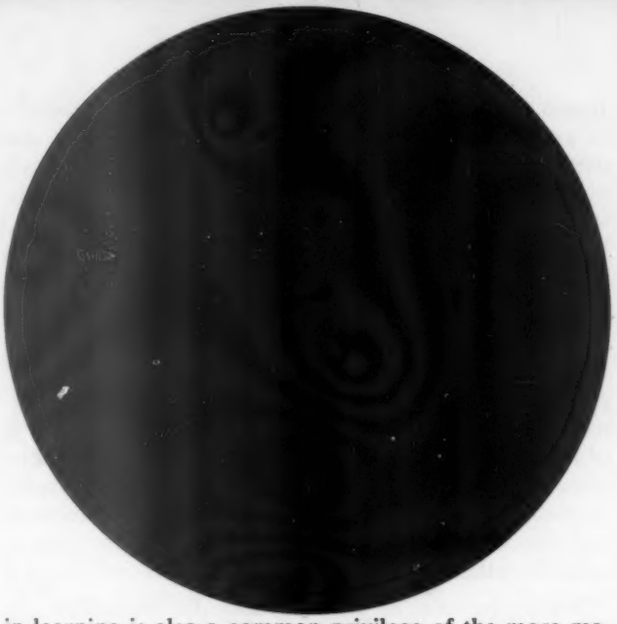
The movement toward use of electronic classrooms and laboratories reverses almost completely the traditional methodology for foreign language teaching. It is by all odds the major "growing edge" in American educational methods. Is ETV going to assist, or possibly interfere? ETV can find a special place where it can supplement the language laboratory when the visual is needed along with the audio. This sort of evaluation of the use of ETV should take place in every field, under the single major criterion of improving learning. ETV can improve the quality of teaching in many fields by bringing to teachers the best methods in those fields, even when the methods shown involve teaching aids other than television. ETV should not dash in to do everything itself—only the things it does best.

ETV, then, should be supported insofar as it improves learning. It is necessary to reject uncritical promotion and to exercise objective judgments on the basis of the evidence. It seems to me that such judgments can be based on rather clear principles.

Optional Viewing

For instance, where viewing is optional, there seems little reason to suppose that educators should refrain from supporting maximum development of nationwide ETV service on open channels, both educational and commercial. It is surely in the public interest that the types of adult education programs illustrated by Edward R. Murrow's documentaries and the Omnibus series should be made more widely available. Special features for special audiences are limited only by lack of imagination or lack of resources. Such features can include discussions of important local, state, national and international issues, programs for children of all ages during hours when they are at home, the fine arts, and systematic courses for persons of any age who may elect them with or without academic credits.

The personal option on how much to use television



in learning is also a common privilege of the more mature students in colleges and universities. They often have alternative courses, or they can go to other colleges where television is not so much emphasized.

Captive Audiences

Educators will be more sensitive, however, about what ETV offers to captive audiences in elementary and secondary schools. These children and youth are held in groups for 180 or 190 days a year through the force of the compulsory attendance laws. It is inconceivable that any considerable number of these young people will be forced into ETV study over any considerable period of time, unless it is really beneficial to them. ETV can impose on pupils just as a very poor teacher does. Perhaps it may impose even more inescapably, since a poor teacher can be removed more easily than an operating network.

This means that the percentage of students who do well with television instruction must be balanced against its effects on other students who do better under instruction throughout the day by teachers and teaching aids providing for two-way discussion. I submit that we do not yet know enough about the total effect on these captive audiences to justify dogmatic promotion of mass ETV in the schools.

This leads me to another point in connection with state, regional and national ETV networks. Television can teach facts, it is better than *no* teacher or an incompetent teacher, it can supplement the work of *any* teacher, and it can greatly expand the range of a *superior* teacher insofar as TV can carry that teacher's contributions to the pupils. Nevertheless, the larger the network and the greater the audience, the less flexibility there is in the classroom.

Mass audiences have brought us low mass standards in commercial television, because the cultural common denominator for advertising is low. For different reasons, network ETV has a similar problem. Mass ETV audiences must receive broadcasts based upon an educational common denominator, and the larger the audience the larger the number of pupils whose needs do not fall within that common denominator. The wider the range of the so-called master teacher, the more pupils he *can* serve—and the more pupils he *cannot* serve effectively. Is it possible that the proportion of pupils not served well increases as the scope of the network increases? May it not be likely that 50 teachers for a subject presented on 50 state networks will perform more hopefully for the future of ETV than a single teacher on a national network or a few teachers on a few regional networks? At the same time, a live national network for optional listening may well be sought.

Teaching Problems

To make the pre-broadcast preparation and the post-broadcast discussion most effective in the classroom, television lessons should be available to each class for more than a single showing. Perhaps the most basic difficulty in television instruction comes from the inability of the students to ask questions and to present their views for immediate discussion and evaluation. It appears that the stratovision project now contemplated, the Videotape project, and state, regional or national live ETV networks can provide for this service, as a practical matter, only through kinescopes or other reproductions for re-use in classrooms.

There may eventually be danger of over-emphasis on television in preparing students for lifelong learning. Possibilities for television learning will be with them throughout their lives, and they should know how to take advantage of them. At the same time, they cannot afford to neglect reading. The use of printed references is indispensable, because it is in this area that a person can exercise the option of studying any of the millions of books and periodicals available. Television is less flexible. A viewer must take the subject that happens to be broadcast. Purposeful learning in the fields of his greatest motivation may be lost if he looks too much and reads too little.

Finance

The question of how to finance ETV stations or networks is important. ETV as a supplementary teaching aid necessarily costs more than traditional teaching alone. Television saves money, if at all, when class size is greatly expanded or when pupils are denied a competent teacher with each class of reasonable size to prepare for the broadcasts and to discuss them afterward. One may doubt that any real improvement of instruction through television will cost less than good traditional teaching.

It was discovered several years ago that school budgets provide a sound financial basis on which to operate ETV stations for general community benefit. If ETV increases the costs of schools without supplying in-school ETV that clearly improves instruction, the net result for the schools will be negative. Promotion of ETV in the schools to justify a regular source of income, insofar as it exists apart from the function of improving instruction, may not long survive in the face of competition for funds that will be certain to improve instruction.

Until we know more about the educational effects of TV, there is inherent danger in large-scale network programming for school use if the purpose is to reduce broadcasting costs per pupil. The financial compulsions of networks lead toward total or direct teaching by tele-

vision, which may easily become an educational catastrophe in the elementary and secondary schools.

Educators were quick to recognize ETV as a potentially great supplementary tool for the teacher to improve instruction, but this idea has undergone a radical change. Due to over-zealous promotional activities, the average businessman, school board member, teacher or parent is now likely to associate ETV with saving money. The public image of ETV as a financial panacea has served the purposes of those who oppose even reasonable educational budgets. Some are willing to seize upon almost anything, with or without proof, to save money or teachers or buildings. I submit that in its present state of development, this is a dangerous public image of ETV, if the improvement of instruction is its major goal.

Timing and Money

Educationally useful ETV can probably be financed without difficulty, once it has fully established its place in the educational program. Meanwhile, there will continue to be some fiscal troubles, but there is probably enough money at present to establish within a reasonable time the legitimate claims of ETV for funds. It may seem to be heresy to some, but to me it appears that the development of educational television is taking place at a pace rapid enough to serve the best interests of education. A sound development, without over-commitments of funds, is needed. Plunging into network operations on a wider scale may in the long run bring negative public reactions that will set back the cause of educational television.

Administration

By its very nature, television must be regulated by the federal government. The Federal Communications Commission makes rules and regulations for the control of television broadcasting of all kinds, including educational broadcasting. For the most part the FCC has been reluctant to influence programming. Under this policy, commercial television reflects a struggle between freedom of broadcasting on the one hand and regulation in the public interest on the other. Many Americans believe that this freedom in using a public resource has emphasized advertising and other commercial interests at the expense of quality programming.

The considerations in ETV networks are quite different. Commercial networks operate on the basis of the freedoms of our economic system. On the other hand, freedom from federal programming regulation in ETV rests almost entirely upon the ability of the state and local governments to prevent federal controls over education. Commercial networks are supported specifically by a powerful complex of business allies. These forces are in a strong position to defend their economic interests against federal interference. It is a disquieting thought that education may have far less strength to resist federal controls over ETV, since its case must be based more upon ideals than upon economics.

The promotion of a national live ETV network by 1968, launched last year by the managers of the ETV stations affiliated with the Educational Television and Radio Center, may or may not be in the best interests of education. On the programming side, research and experience will in time provide an answer. On the administrative side, however, education could easily be led into a long-term fiscal trap from which it would have the utmost difficulty in escaping whether or not the educational results are really good.

The reason is that the cost of a national live ETV network would be very large, and that most of its backers want federal funds to build it and perhaps to operate it. Control by the FCC of the physical arrangements for television is one thing, but federal control of funds which make it possible to teach the same televised lesson in classrooms from coast to coast is quite another. Public policy in education would be involved, and the decisions might easily be made for reasons other than the improvement of education.

Such legislation as the Magnuson bill passed by the Senate last April, considered as a "one-shot" aid to get physical facilities in each of the states for state use, would be comparatively harmless so far as subsequent federal controls are concerned. Even in this instance most chief state school officers, who have had extensive dealings with a number of federal agencies, would undoubtedly recommend that state and local autonomy be carefully protected during the planning and construction period.

State-supported ETV networks, even with some federal assistance, would be less likely to suffer from federal controls than a national network. Organization for ETV, as Dr. John E. Ivy, Jr., has recently said ". . . should be within the boundaries of traditional state and federal relationships. These boundaries hold that the states and localities shall have the primary responsibility for providing a system of public education." The states and communities will almost certainly have difficulty protecting education against tendencies the federal government would have to influence the educational use of a national network. Allocations of federal funds for maintenance and operation of such a network year after year would surely carry with them more danger of federal control of education than any general proposal for educational support now before Congress.

So let us begin at the local and state levels when captive audiences of school children are involved. Let each state, as Justice Holmes long ago suggested, become a laboratory for experimentation and progress. Let them learn from each other during a period of years to establish the educational place of television in classrooms. Concurrently, we can learn a great deal by moving ahead rapidly on open-circuit ETV broadcasting to all age groups on an optional basis.

We should press forward with research and experimentation in every direction to harness the wonderful potentialities of television for education. The stratovision experiment, the Videotape network, the controlled experiments in school systems and colleges and universities, and other research should be liberally supported. Here is an area in which fear of federal control of education need not restrict the federal government from full partnership, as it is in full partnership for this conference.

STRATOVISION BECOMES REALITY

WHEN SCHOOL OPENS NEXT FALL, courses on video tape taught by outstanding teachers recruited from all over America will be televised from a DC-7 aircraft some 20,000 feet over north-central Indiana and beamed to classrooms in Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin. Formal announcement of this first experiment in airborne television was made October 16 by the Midwest Council on Airborne Television Instruction which will conduct the experiment in conjunction with the Purdue Research Institute. Thus, "stratovision"—a concept which has long tantalized TV educators—becomes reality.

The stratovision technique (rebroadcasting TV signals from a high flying airplane) was originated in 1944 by Charles E. Nobles, a Westinghouse engineer who later headed the company's three-year experimental program carried on in a modified B-29. The first application of the technique to education is described as a "two-year pilot experiment to test the feasibility and usefulness of a system of airborne multichannel instructional television for schools and colleges." It will service a circular area with a diameter of from 300 to 400 miles. Programs will be transmitted from ground-based facilities at Purdue to the circling four-engine aircraft some distance away and re-telecast to schools and colleges participating on voluntary basis.

Estimated cost for the "tooling-up year" and the first year of broadcasting is nearly $7 million, the funds to come from foundation grants, private gifts, industrial corporations, and others. The Ford Foundation has set aside $4½ million to match gifts and grants from these sources. (It is estimated that once the airborne system is functioning—and used by most schools in the reception area—the annual cost of delivering courses may fall as low as $1 to $10 per pupil.)

Assisting on the technical end, besides Westinghouse, are CBS Laboratories and General Dynamics Corporation, the latter providing aeronautical advisory services. The experiment will begin with two "wide-band" UHF transmitters aboard the aircraft, permitting two different programs to be televised at once. An unusual feature will be the testing of "narrow-band" telecasting on two special channels carrying the same programs as the conventional UHF channels. Developed by CBS Laboratories with cooperation from Minnesota Mining and Manufacturing Company, "narrow-band" telecasting has the potential of doubling the number of courses carried over conventional channels. The specially designed receivers needed for "narrow-band" programs will be supplied to about a dozen test schools. Several hundred other schools are expected to equip their classes for conventional UHF telecasts in preparation for the program, which is strictly voluntary. Aeronautic advisers predict that, with spare aircraft to meet weather and maintenance contingencies, the telecasting aircraft can be expected to be on schedule 98 percent of the time.

At the outset the instructional telecasts will be limited to 24 half-hour lessons per day, consuming a total of six hours per day, four days per week. Later, the Council hopes to add courses up to 72 half-hour lessons per day. Most courses (which consist of approximately 144 half-hour lessons during a school year) will be on video tape, recorded either at the Purdue studios or at production centers throughout the country including experienced ETV stations. All live telecasts will originate at Purdue. Courses will be offered at secondary, elementary, and college level in a 40-40-20 ratio.

One of the principal functions of the Council will be to recruit the necessary TV teachers and to produce their courses on video tape. To this end, the Council, in cooperation with educators and local TV stations throughout the country, is making a nationwide talent search. Final choice of teachers, however, will be made by leading educators in the six-state region. Other major functions of the Council will be to work with educators in the region in preparation of special texts, study guides, and other materials; to cooperate with classroom teachers in developing ways to make maximum use of the televised instruction; and, to join with schools and colleges in evaluating results.

Council members are Chairman Samuel M. Brownell, superintendent of schools, Detroit; Novice G. Fawcett, president of Ohio State University; John Guy Fowlkes, School of Education, University of Wisconsin; Lyman V. Ginger, past president of NEA; E. E. Holt, superintendent of public instruction, State of Ohio; Frederick L. Hovde, president of Purdue; John W. Taylor, executive director of the Chicago Educational Television Association; Herman B. Wells, president of Indiana University; and Benjamin Willis, superintendent of schools, Chicago. John E. Ivey, Jr., former executive vice president of New York University, is president and executive officer.

A Plainedge student directs a program on Japanese culture produced with the cooperation of the Japanese Counsel General in New York City. The above illustrates one advantage of the Plainedge system—basically inexpensive equipment which the students themselves operate.

TV Tailored to the High School Classroom

Robert M. Diamond

Leonard Harper, industrial arts teacher, shares Indonesian art experiences with large numbers of pupils through telecast. Note intricate work which would make excessive handling of figures impractical. Harper spent two years in Indonesia with the Indonesian education department.

IN THE MILLIONS OF WORDS spoken and written about educational television in the past several years, one important use of the medium has been consistently overlooked: closed-circuit operation within a single secondary school. The fact that technological developments now permit the installation of a complete two-camera closed-circuit chain for less than $15,000 makes this a glaring oversight.

Most of the money spent on research and experimentation so far has come from the Fund for the Advancement of Education, which has been mainly interested in television as a possible solution to the teacher shortage. And while I do not say their approach is wrong, I would like to point out that this is only one area in which television can serve, and that, for the very reason that Fund money has been diverted into these channels, neither educators nor the population hear much about the other uses of the medium.

As an example of educationally sound use of closed-circuit TV at the secondary level I would like to cite the program operated in the Plainedge Junior-Senior High School on Long Island during the 1958-59 school year. Last year every department in the school used the medium extensively. Less than 30 school days passed without a telecast program. (The state of New York has now granted funds to this school for research and evaluation of its project. This might set a precedent for local

The author was TV coordinator for the Plainedge Schools until this fall when he joined Dick Lewis' staff at San Jose as supervisor of instructional television.

Robert Guatelli of IBM during a program featuring the inventions of Leonardo da Vinci. Dr. Guatelli who is a renown da Vinci scholar explained an exhibit loaned by the IBM company.

research projects to counter-balance that instituted by big Funds.)

The programs at Plainedge are themselves unique in that they are designed by the department and the teachers using them, and are scheduled to reach the classes for which they are intended at the exact time the teachers want them. Overcoming the scheduling problem, I believe, is one of the main advantages of closed-circuit over open-circuit TV for secondary schools. While I believe that an open-circuit approach can fulfill some of the needs of an elementary program, it is in the secondary schools that closed-circuit TV must take over a greater part of the job. Each of our schools has its own bus and cafeteria problems. Rarely will two high schools be on the same schedule. Whereas in the elementary schools the teacher can change her planning to fit an open-circuit schedule, on the secondary level this is almost impossible. A second advantage is that when a television program is used in a single school (or two schools) all of the teachers involved can help plan the telecast. In this way television can be made to fit the needs of the classrooms.

To operate educational television on this basis, the equipment must be especially designed. Television sets must be mobile and every classroom convertible into a television studio. At Plainedge even the control equipment is mobile. The school intercommunication system makes it possible for students in the classrooms to phone in questions during the telecast. With this equipment science programs have been televised from science rooms where the apparatus was available; a program on how newspapers are printed has been transmitted from the print shop to the English classes.

Three basic types of programs were telecast last year. First, television was used to improve substantially the instruction of certain aspects of courses. (An example is the well-known one of dissecting the frog, with students profiting from the enlarged pictures which enable them to follow the instructor step by step.)

A second type of program is the one in which television saves time and effort. An example is the library orientation program televised from the library into English classes. By using television 2200 students at Plainedge were able to receive the program in less than two days. With one class going at a time, this orientation would have taken close to a month, to say nothing about tying up the library staff in the process.

The third type is responsible for about 80 percent of programs. Through television Plainedge has been able to bring in outstanding educators, businessmen, representatives of foreign countries, and exhibits that otherwise would be unavailable. Also, for the first time an entire department has been able to use an outstanding project carried on in a class where the teacher possesses special talents. In this way, TV enables the school not only to take advantage of outside resources but to exploit to the fullest those found in the school.

The Teacher Keeps a Firm Hand

The success of the project at Plainedge can be attributed to the fact that the programs are molded to fit the classroom; not the classroom to fit the programs. In every case the teachers who are to use the program work with its formulation so that they are sure it contains what they want it to contain, and that it is scheduled for the proper time. One or two teachers will have the responsibility of seeing that all of the teachers within the department are kept informed and given program outlines well in advance.

Success has also been dependent on the fact that only one program is normally telecast in a day and that this program is repeated several times, insuring that a majority of the classes for which it was designed will receive it. This is, of course, rather tiring for those on the program but until video tape becomes more commonly available this one shortcoming will have to be overlooked.

Another advantage of the Plainedge program is that, while the equipment is basically inexpensive, it is also controlled, operated, and repaired by the students themselves. In this way the television operation has become an integral part of the entire school program.

Last year Plainedge saw many experiments with television programming. Some presentations were excellent; others not so successful. Plainedge has learned that efficiency of television as a teaching tool depends on the amount of cooperation and planning done with teachers who are going to use it. In addition, it is a community venture. Success can only be sustained as long as there is full cooperation between the administration, teachers, and television department. It has not saved teachers. On the contrary, it has given many of them extra work. Extra work that has helped improve instruction within the school and that has brought a new concept of teaching into operation.

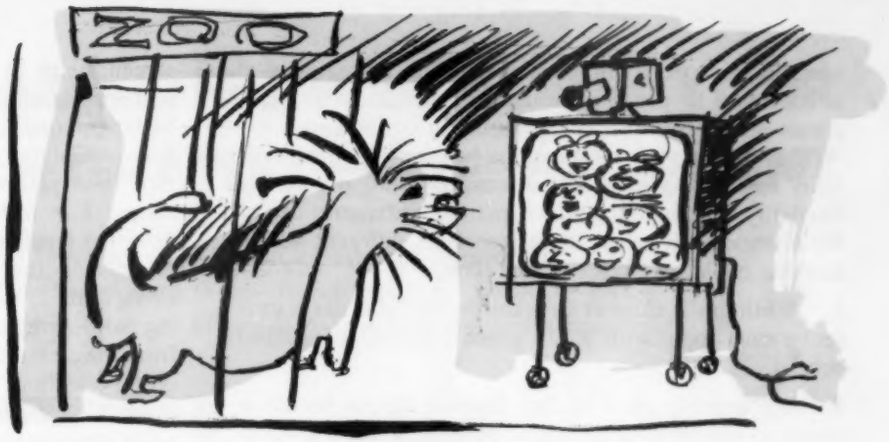
Galveston Experiments

PHONOSCOPE is the trade name for a television camera manufactured in combination with a 21-inch receiver. The unit is made to be portable. The camera weighs only five pounds and is two-and-a-half inches wide, six inches high and seven-and-a-half inches long. The camera operates efficiently in normal room lighting. In early 1960 the manufacturers hope to have perfected a transistorized camera only half the size of the one described above and, a little later, a completely new type television screen, which will have a three-by-five foot surface, be one-fourth inch thick, and will hang on the wall like a picture. It will give twice the quality light control afforded by the present screen and its brightness contrast will be such that the images can be seen outdoors.

With this equipment, Phonoscope Incorporated of Galveston, a newly created utility service, believes that it will completely revolutionize the application of educational television by solving four basic problems that have plagued equipment manufacturers and school men for the past five years.

A lease arrangement will eliminate the high purchase cost of equipment which all too quickly becomes obsolete. Extreme simplicity of equipment precludes the problem of finding trained personnel to operate and maintain it. Phonoscope offers two-way communication for both sound and picture to solve the problem of feedback. By incorporating video tape recording equipment Phonoscope expects to overcome schedule rigidity.

The author is supervisor of the instructional resources department which will assume major responsibility in the Galveston experiment. In a letter he pays tribute to the "vision and pioneering spirit" of his superintendent, Morgan E. Evans, and to the Galveston Board of School Trustees. A former teacher of speech and dramatics, Mr. Hardie has worked part time in commercial television. He is in his third year as a member of the TEXAVED board of directors.



with Two-Way Video

Jim Hardie

WHETHER OR NOT PHONOSCOPE equipment can measure up to the manufacturers' hopes will be tested this year in Galveston, Texas, where at no cost to the schools, Phonoscope Inc., will equip eight elementary schools and the administration building, and provide facilities for a studio in the instructional resources department. After a year of experimentation and evaluation the Galveston schools will be asked whether they wish to retain the services at an estimated $14,110 per year.

Upon hearing of the proposed experiment at Galveston the Ampex Corporation offered one of their video tape recorders at no cost for the experimentation period. This piece of equipment alone retails for over $50,000.

Phonoscope operates on the closed-circuit principle. All of the units are connected by coaxial cable to a central switchboard. The switchboard is the key to the effectiveness of the entire system. The video and audio signal originating at any one of the phonoscopes can be received only by other receivers connected to the switchboard. Several phonoscopes can be put together in a network arrangement in such a way that persons located at each instrument can be seen and heard by all the others. This provides a unique means of inter-school communication where conferences and committee meetings can be held with minimum loss of time and without the inconvenience of traveling to a central meeting place.

The Ampex Video Tape Recorder is a highly complex piece of equipment to manufacture but comparatively simple to operate. It is similar in principle to the regular audio tape recorders, but in addition to recording sound, it also records the video picture fed to it from a television camera. Thus both audio and video is recorded on a magnetic tape which can be played back through television receivers at any later time. The tape takes many replayings without loss of quality. Tapes can easily be erased and re-used, thus providing an economical means for recording programs whose value is of short duration, such as newscasts, interviews, and certain types of demonstrations.

The coaxial cable used in this type of closed-circuit installation is capable of carrying more than six different two-way communications at one time without interference. It carries both sound and picture from one phonoscope to another. All phonoscopes in each of the eight schools, the administration building, and studio will feed into the central switchboard by cable. The dual control switchboard can be operated manually with an operator in complete control of the communication between two or more phonoscopes, or it can be switched to automatic so that each phonoscope can be operated individually. This feature is particularly desirable when a network of phonoscopes is used for a conference.

Our Galveston schools will have a low-cost central studio—soundproof and providing a limited amount of special lighting. A boom for a microphone and a portable camera on a tripod along with a regular Phonoscope instrument will provide adequate facilities for presentations needing special flexibility. One hundred seventy classrooms will be wired for Phonoscope, although there will be only one portable unit in each of the eight elementary schools. Any of the classrooms can be used as a studio because each phonoscope is equipped with a camera. The cameras operate from fixed positions and therefore do not require cameramen to handle them. (This is a limiting factor which must be considered, but should not prevent satisfactory communications.)

Operating as a utility in the city of Galveston, Phonoscope Inc. will provide our schools with maintenance service on all equipment and will make immediate replacements wherever necessary. The schools, therefore, will not be required to hire trained technicians to care for equipment and facilities. The Phonoscope equipment is purposely designed for easy operation by persons with no special television training. The designers say that if you can operate a TV set at home, you can easily learn to operate the two-way Phonoscope equipment.

The purchase price of this equipment, which the man-

ufacturers propose to install solely on lease basis at about $14,110 per year would be well over $100,000, a sum prohibitive as a single outlay in our schools.

The two-way communications feature plus the possibility of utilizing every classroom as studio provides a flexibility of scheduling which permits maximum use of the channels. Here are examples of six different activities that could take place at one time.

1 A 6th grade class at Crockett School debates a current-events topic with a 6th grade class at the Alamo School.

2 A 4th grade class at San Jacinto School invites a visitor to talk on a recent trip to Norway. Fourth-graders at the Rosenberg School, also studying Norway, share the interview via TV.

3 Making use of the video tape recorder, the phonoscope presents a previously prepared demonstration of magnetism to a 3rd grade class in science at Alamo School.

4 Fourth grade classes at Washington and Carver Schools receive a lesson in Conversational Spanish from a teacher located in the central studio.

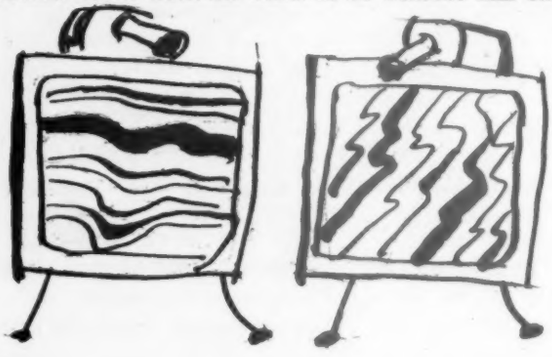
5 A 2nd grade class at Sam Houston School sees a film over Phonoscope on the subject of animals.

6 A staff member in the administrative building is working out plans via TV with a businessman in downtown Galveston who is equipped with Phonoscope. The plans concern a 5th grade field trip which will also be via TV. (Operating as a utility service under a city franchise Phonoscope hopes also to equip business firms and other institutions with closed-circuit equipment. By means of a central switchboard the schools can be connected with outside systems.)

At Galveston we plan to use the television facilities in these four areas: staff communications, inservice education for teachers, as a resource tool, and for direct teaching.

Face-to-face communications among the staff can be carried out between individuals and groups separated by distance. Planning meetings, committee meetings, and individual conferences are possibilities. Written material such as statistical information or school records can be shown from one school or office to another. The instructional resources department not only can discuss materials with teachers over phonoscope but can give them on-the-spot previews.

One of the established values of educational television is what it does to upgrade the quality of teaching—one teacher learns from the other as he watches him on the screen; he picks up new ideas; he generally sharpens his performance to keep the pace. This value will probably be heightened in the close-knit operation we anticipate here at Galveston. Another use made possible by video tape is in planning demonstrations for teachers' workshops. For instance, in a reading workshop a well-qualified teacher might show how she works with poor readers; another might demonstrate the teaching of fractions; a third, ways of using the tape recorder as a teaching aid. Examples of good teaching can be taken directly from the classroom by Phonoscope camera and recorded on tape without the pupils' knowledge. If a lesson turns out poorly, the teacher has only to erase the tape and try again the next day.



May Solve Film Problems

The possibilities for enrichment through Phonoscope are numerous. Again with the use of video tape, science and art demonstrations by well-qualified teachers can be recorded and placed in a tape library. Interviews with resource persons can be handled likewise. Film showings over Phonoscope may solve one very real problem in Galveston. Last year the film library turned down 787 requests because popular demand kept the prints out. Showing a film several times during the day from a central studio would alleviate this problem as well as eliminate the time consumed in transporting the films, checking them upon return, etc. As business and industries in the community begin to make use of the Phonoscope services, field trips via TV would be definite possibilities. Recording these experiences on video tape is another.

The Galveston schools plan to restrict direct teaching by television to Conversational Spanish. Spanish will be taught to high achievement classes of 4th, 5th, and 6th graders in each of six schools. A single 4th grade class will be taught in the other two. It has been proposed that the eight 4th grade classes have 20-minute sessions and that only two receive instruction at one time —the reason for the latter is to keep the two-way communication from becoming overloaded. It has been suggested that three classes of 5th and 6th graders be scheduled simultaneously on an experimental basis because it is supposed that they will need less individual attention. Total television instruction time per day will be approximately three hours. This is designed purposely to keep the rest of the school day for preparation of the televised lessons.

The Galveston schools enter into their agreement with Phonoscope in the belief that their experiment with this revolutionary equipment will perform a service for schools throughout the country. (The equipment is so new that the companies involved will provide custom-made instruments.) We feel that this is a chance to pioneer in an entirely new phase of educational television and to learn firsthand its potentialities for better staff communications, inservice training, as a resource tool, and for direct teaching. At no time, however, could this agreement have been made if Phonoscope Inc. had not guaranteed us that the program would be left completely to the schools. Except for offering technical assistance, Phonoscope will maintain a "hands off" policy.

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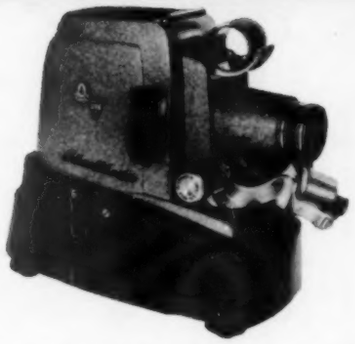

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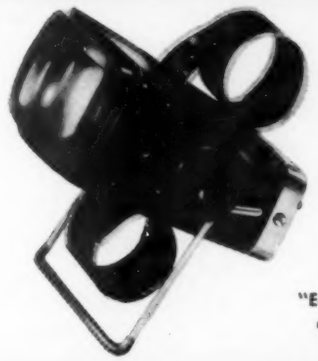

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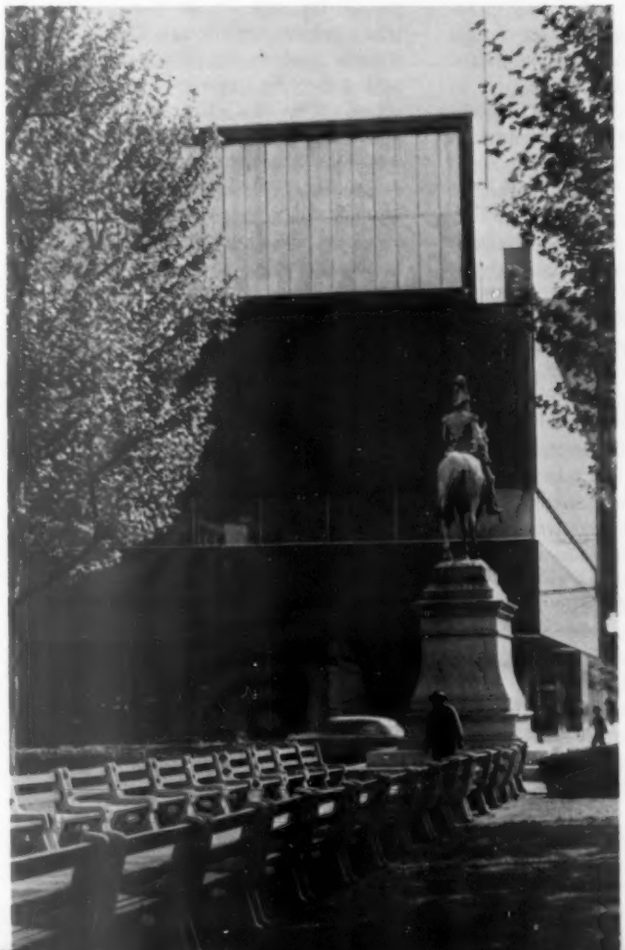
the Queen City

THE QUEEN CITY seen through the piers of Suspension Bridge. Rising in the center is the Carew Tower which houses the Netherland-Hilton, headquarters hotel for the DAVI Convention

ONE OF THE NATION'S NEWEST. A stone's throw from the headquarters hotel, the Cincinnati and Hamilton County Memorial Public Library is scheduled for a DAVI field trip. Among attractions are a film record library with 10,000 single records and albums, children's area on the top floor with outdoor terrace; the Huenefeld Tower room displaying rare book treasures; and at street level, a garden enclosed by an unusual serpentine wall.



AUDIOVISUAL CENTER at Miami University. Shown is the printing area. Transportation will be available for the 35-mile drive to Oxford to visit these facilities, newest of their kind.

WONDERLAND OF EDUCATIONAL EXPERIENCES, the Cincinnati Museum of Natural History served approximately 50,000 school children in 1958-59 either in special classes or organized visits. Oldest museum of natural history west of the Alleghenies, it is housed in a new building with eye-level arrangements for children, colorful displays, subtle lighting. DAVI trip scheduled.

HILLTOP STUDIO. Situated on Mt. Olympus overlooking Cincinnati, the Ohio River, and the Kentucky hills, Station WCET is a million dollar facility dedicated to the use of TV as a community educational and cultural tool. The first licensed ETV station in the nation, WCET will be among scheduled DAVI field trips.

looking at

new literature

Interaction Pamphlet Exceeds TV Considerations

by Leslie P. Greenhill

ONE OF THE FACTORS that has most seriously inhibited the acceptance of television for classroom instruction is the belief that the best and perhaps the *only* good method of instruction is one that provides for direct two-way interaction between student and teacher. Television, it is claimed, is a one-way channel of communication which does not permit interaction, and is therefore unsatisfactory for direct instruction. *Interaction in Learning: Implications for Television* will do much to broaden this rather narrow point of view. It shows that interaction has a great many dimensions, of which student-teacher interaction is only one, and that these dimensions serve a number of functions in the learning process. This volume is a real contribution to the literature on learning because it brings together much information and theory concerning interaction from the fields of psychology and communication and shows how these apply in practical ways to learning not only from televised instruction, but in the conventional classroom as well. For these reasons the volume should be invaluable to classroom teachers, television teachers, curriculum planners, audiovisual specialists, instructional television producers, educational administrators, educational researchers, and to those concerned with training people for these respective fields.

Interaction in Learning: Implications for Television is a report of the four-day seminar sponsored by the NEA last February in which individuals with a great variety of backgrounds and experience were brought together to concentrate attention on those aspects of the learning process which might be considered under the heading of interaction. Among the participants were educational psychologists, learning and communication theorists, audiovisual specialists and adult educators, as well as teachers, educational administrators and television coordinators.

Dr. Greenhill is associate director of the Division of Academic Research Services, Pennsylvania State University.

Interaction in Learning

The volume is divided into two main parts: Interaction in Learning, and Implications for Television. Part one deals with information, evidence and theory drawn from psychological, educational, and communications research. It opens with a discussion of the basic question, What is interaction? It soon becomes apparent that interaction has many facets which range from the "give-and-take" between student and teacher in the classroom, to the "feedback" which is necessary to regulate the learning process, and to the perceptual processes whereby the learner selectively interacts with the subject matter.

Furthermore, interactions which promote learning can occur between student and student, whereby students learn from each other; between teacher and teacher, as for example in faculty meetings, or in course planning sessions; between subject and subject, when formal attention is given to interrelations between various disciplines, or informally when learners study a variety of subjects; and between learner and his learning environment in the school, in the home, and in the community. The latter would include interaction with books, radio and television programs and the like.

As a result of these discussions the participants at the seminar concluded that the definition of interaction as "two-way communication" is oversimplified and inadequate. As an alternative they propose the following definition: "Interaction is the pattern of reciprocal effects of ideas, things, or people on each other—the reciprocal effects of stimuli."

The discussion goes on to consider the conditions within the learning situation which affect interaction. It is pointed out that interaction can be overt as when the learner responds to or asks a question. It may be covert, or within the learner, as for example when he compares what he is now being taught with his past experiences. Clarence Faust has pointed out that this critical "internal dialogue" may be one of the most effective and desirable types of interaction, especially for the more mature student.

Interaction can also be varied as to when it takes place. It may be immediate or delayed. Furthermore, there are various kinds of interaction. One of these is defined as "live interaction." This occurs when two people have a discussion. A second type is described as "quasi-interaction." This refers to the kind that may occur when learners viewing a presentation are encouraged to participate in some overt way, by responding to questions posed on the screen, by repeating words and phrases, by solving short problems, or even by taking notes.

In the reviewer's opinion this is a very important form of interaction because, properly handled, *every* student can be encouraged to make responses which he can check for correctness when results are known. The usual recitation process for encouraging interaction may be quite inefficient, if, as is usually the case, time and other circumstances do not permit *all* students in the class to make responses to every question. A third kind of interaction is identified by the seminar participants as "simulated interaction." This refers to the ability of a good teacher to anticipate students' questions and problems from past experience and to handle these perhaps by means of rhetorical questions or some similar technique.

It was proposed in the seminar that *all* three types of interaction processes should be used according to the appropriateness for various learning situations.

It was agreed that the amount of interaction necessary depends upon the kinds of specific learning objectives desired. It was hypothesized that the amount necessary will vary according to whether the learning situation is knowledge-centered, student-centered or skill-centered. The kind of interaction should also vary with the learning task and with the maturity level of the

students. For example, overt participation is probably most important with skill-type subjects (reading, foreign language, and courses requiring manipulation of apparatus), for less mature students, and for those in the lower grades. Covert participation may be more appropriate for subjects that are chiefly conceptual in nature and for learners at the more advanced levels (such as college students).

This discussion leads naturally to a consideration of the *functions* served by interaction. One of the most important of these is "reality testing," whereby students can test out their ideas or responses for correctness. Another aspect of interaction involves its social functions. Some students may strive for recognition by their teachers or peers. In addition, interaction may serve important reinforcing functions by confirming correct responses and extinguishing incorrect ones.

Prepared by Finette P. Foshay (Mrs. Arthur W.), the Interaction pamphlet is on sale from the DAVI national office for $1 per copy. 2 to 10 copies, 10 percent discount; more than 10 copies, 20 percent.

Unfortunately, in this reviewer's opinion, the seminar gave insufficient attention to the disadvantages or interfering effects of inappropriate uses of interaction. Some of the more obvious examples are questions which divert the class from the main topic under study, taking class time for the discussion of difficulties important to only one or two slow learners or to a learner who was not paying close attention—or the use of interaction as a cover-up by a teacher who is not well prepared! There is also the possibility that too much direct student-teacher interaction in the form of question and answer might build up undesirable dependency relationships and might thus mitigate against the development of self-reliance and the ability to study independently.

Implications for Television

The second part of the volume attempts to show how interaction of various kinds can be encouraged through the use of television — a medium of communication which is commonly thought of as a one-way channel. A great many practical suggestions are offered which the reader should study and test out for himself. These are considered under the headings of (1) achieving interaction, (2) striving toward maximum interaction, and (3) the special television experience.

Among the techniques described were these: the use of a sample audience in the television studio to raise questions with the television teacher during or at the end of the lesson; the presentation of questions or short problems over television followed by a brief pause while the students make either oral or written responses in the classroom; the use of inter-communication systems for two-way communication in closed-circuit television installations; the use of short quizzes either before or after the telecast with answers given; the use of peer group discussions under student chairmen following a telecast; the use of supplementary activities led by a classroom teacher following a telecast; and the provision of opportunities for concurrent participation by the students in the classroom (especially where laboratory skills are demonstrated). To this list the reviewer would add the inductive method of teaching in which learners are encouraged to interact with the subject matter as it is being developed, rather than being required merely to listen to an exposition of content by the television teacher.

These techniques should be built into the television presentation by the teacher and producer, and necessary materials should be available in the classrooms when concurrent practice is carried on by the viewers. The seminar discussants point out that in the television situation students may have to be taught how to learn from television presentations in order to take full advantage of these various opportunities for different kinds of interaction.

The final section of the report stresses the fact that the subject of interaction in learning as such has not been treated in the literature of psychology, and that there has been very little relevant research. A number of hypotheses are proposed for future research.

It seems to the reviewer that this intensive discussion of the various forms that interaction can take has broad implications for teaching methods in general. One might hypothesize that to obtain maximum development of learning skills with the best possibilities of transfer to real life situations, students ought to be exposed to a large variety of teaching methods and situations which provide for many different kinds of interaction and which require different kinds of learning skills. These situations might include instruction in

(Continued on page 278)

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For President Elect

McPHERSON, J. J., chief of dissemination and services, new educational media branch, U.S. Office of Education since August 1959; chairman, department of audiovisual education, College of Education, Wayne State University, 1955-59; executive-secretary, DAVI and director, Division of Audio-Visual Instructional Services, NEA, 1950-55; director, instructional materials services and associate professor of education, Drake University, 1947-50; director, department of instructional materials, university extension, University of California at Los Angeles, 1946-47; director, instructional materials center, Kern County Schools, Calif., 1943-46; teacher of English and social studies, Blair Junior High School, Norfolk, Va., 1934-41. Currently chairman DAVI Committee on International Relations; member DAVI Executive Committee; vice-president, DAVI. President AV Education Association of Iowa, 1958-59; of AV Education Association of Calif., southern section, 1945-46; U.S. representative to International Council for Educational Films, 1952-55; producer or educational consultant for numerous educational films and filmstrips including the recent *Language Teaching in Context* (Wayne State University) and a series of seven NEA films and filmstrips; member, ASCD Commission on Instructional Materials; NEA life member.

TIEMANN, Ernest, associate professor of education and director, visual instruction bureau, University of Texas, 1951 to date; assistant professor of education and assistant in circulation, Indiana University, 1947-51; organized teaching materials center, Pueblo (Colo.) Junior College, 1943-47; elementary and secondary classroom teaching (17 years), Fall City, Nebr., and Pueblo, Colo. A.B., Concordia Teachers College (Nebr.), 1928; M.A., Western State Teachers College, 1944; Ed.D., Indiana University, 1951. Member DAVI Board of Directors as delegate-at-large, 1956-59; currently chairman Professional Audio-Visual and Teacher Education Committee, member AVI Editorial Advisory Board; past chairman of Certification Committee, Convention Evaluation Committee, President's Advisory Committee on Conventions; member National Convention Committee, 1957-59, also Legislative Committee, Professional Education Committee, Teacher Education Committee, AVCR editorial board; participant Lake Okoboji Conference 1956-58. Advisor NEA Educational Policies Commission, 1959-61; TEXAVED president, 1952-55 and executive secretary 1956 to date; member NEA, American Association of University Professors, ASCD, Phi Delta Kappa; editor of Bridges for Ideas Handbook Series.

WILLIAMS, Don G., director of audiovisual instruction and professor of education at the University of Kansas City; director of audiovisual center and professor of education, Syracuse University, 1948-59; associate director of AV center and director of motion picture production, Indiana University, 1947-48; research director, National Educational Films, New York City, 1946; U.S. Navy, 1941-45; chairman of audiovisual instruction for Berkeley (Calif.) public schools, 1940-41; psychology instructor San Jose State College, 1938-40; AV director Great Falls (Mont.), 1932-38 and science teacher, 1930-32; research assistant Anaconda Copper Company, 1927-30. B.S. Washington State College, 1927; Ed.D., Leland Stanford University, 1945. Active in DAVI since 1932 and member of several DAVI committees. Life member of NEA; past president, New York State Audio-Visual Council; founding member and past president University Film Producers' Association; member of CINE; trustee University Film Foundation; U.S. representative to International Film Festival at Cannes 1954, 1955, 1959; at Venice, 1956; at Rome, 1959; founding member and first chairman of the Audio-Visual Commission on Public Information; operated contracts for the State Department and acted as AV consultant for Iran, Turkey, Greece, Egypt, Lybia, Iraq, Korea and Tunisia, 1951 to date; directed ICA institute for AV leadership (19 trainees from overseas) 1955-56; author *Motivate, Teach, Train,* booklet published by Point IV (1952) and translated into 11 languages; contributor to 48th Yearbook of National Society for the Study of Education and 29th Yearbook of Association for Student Teaching.

For Vice President

McBRIDE, Otis, head, department of audiovisual education, School of Education, Florida State University, 1953 to date; dean of men, 1946-53; U.S. Army, 1941-45; B.S. and B.A. North Texas Teachers College; M.A. 1931 and Ph.D. 1941 George Peabody College for Teachers. Member DAVI Convention Planning Committee 1959, 1960; program participant National Convention 1957-59; member Revision Committee for No. 1 *Planning Schools for AV Materials;* participant Okoboji Conference 1957-59. Member state board of managers and chairman PTA film library, Florida Congress of Parents and Teachers, 3 years; board of directors, Florida AV Association; member program planning committee Florida Education Association, 1959; participant National Educational Television Conference, Indiana University, February 1959; organized Southern Regional Conference, EFLA, Tallahassee, 1958. With members of library school of Florida State University and State Department of Education conducted materials clinics in Florida for 3 years; member of EFLA.

MILLER, Clyde K., director, division of audiovisual education, State of Ohio Department of Education, 1951 to date; supervisor, audiovisual education department, Gary (Ind.) public schools, 1942-43, 45-51; U.S. Navy, 1943-45; director of visual education, Dover (Ohio) public schools, 1931-37. A.B. Hiram College (Ohio), 1931; M.A. Ohio State University, 1940; Ed.D. Indiana University, 1952. Chairman DAVI national membership drive, 1958-60; acting vice president DAVI, 1958-59; member DAVI Board of Directors as delegate-at-large, 1956-57; member DAVI National Convention Program Committee and other DAVI committees. Past president ACSSAVO; member Ohio Education Association, AV Directors Association of Ohio, and Phi Delta Kappa; author *Film Today, A Guide to Better Teaching* (1954); contributor to *See and Hear, School Affairs, Educational Screen, Educational Focus, Home Movies,* and AUDIOVISUAL INSTRUCTION.

PARSONS, E. Dudley, consultant in visual education, Minneapolis public schools, 1946 to date; high school science teacher, Washburn High School, Minneapolis, 1937-46; missionary teacher and later high school principal, Mussoorie, U.P., India, 1930-37; high school teacher northern Minnesota, 1928-30. B.A. Hamline University (St. Paul), 1928; M.A. University of Minnesota, 1941. Member DAVI Board of Directors, 1958 to date; member, National Convention Program Committee, 1956-59; chairman Minneapolis Convention, 1958; attended Okoboji Conference 1957-59, co-chairman in 1959, and member of the planning committee for 1960; member, Equipment Standards Committee. Member planning committee University of Minnesota Annual Audio-Visual Institute; president AV Coordinators Association of Minnesota, 1958; member planning committee AVCAM Regional Leadership Conference, Clearwater Lake, 1957 and 1958.

all DAVI members December 1

James D. Finn

Voted president elect last year, Jim Finn automatically takes office at the Cincinnati Convention.

For Delegate-at-Large

BAGLEY, Russell E., supervisor of instructional materials programs, Ft. Myers and Sarasota (Fla.), 1953 to date; librarian and classroom teacher in Florida public schools for 12 years; has also taught at junior college and university level in Florida. B.A. and M.A. University of Florida; B.S. in library science, George Peabody College for Teachers; Rank I Certificate (doctoral equivalent in Florida certification); has done advanced post-graduate work at Florida State University. Member DAVI Board of Directors, 1958-59; participant in Okoboji Conference 1958 and 1959. Member board of directors, Florida AV Association; past president, Florida AV Association.

COCHRAN, Lee W., executive assistant, extension division and director, bureau of audiovisual instruction, State University of Iowa, 1946 to date; officer in charge, training aids sections, U.S. Navy 13th and 1st naval districts, 1943-46; director, bureau of audiovisual instruction, State University of Iowa, 1936-43; supervisor, bureau of visual instruction, State University of Iowa, 1930-36 and AV student assistant, 1924-30. Past president and past vice president, DAVI; member DAVI Executive Committee and Board of Directors; chairman, DAVI Field Service Committee; Iowa chairman of all Okaboji Conferences; member Archives and other DAVI committees. Member of NEA, AVEAI, Phi Delta Kappa; formerly chairman, National University Extension Association's division of audiovisual communication, also member NUEA executive committee; consultant in audiovisual education, San Diego County, Virginia State College and North Dakota State Department of Education; member, governing board, School Facilities Council, 1959-60; advisor 2 years ICA Communication Media Evaluation Panel and one year MSA overseas program; advisory board Air University (Montgomery, Ala.) 3 years. Co-author *Manual of Audio-Visual Techniques* (Prentice Hall) and contributor of chapter to DAVI's *The School Administrator and His Program.*

KING, William H., state coordinator of audiovisual education, New Jersey State Department of Education, 1950 to date; AV director Plainfield public schools, 1942-50; principal Sewell public schools, 1941-42; teacher, Pitman, public schools 1940-41 (all New Jersey); director New Jersey Educational Television Project, 1950-54. B.S. (1940) and M.S. (1947) Glassboro State Teachers College; graduate work at Temple, Columbia, Rutgers, Southern California, Kent State, and New York universities; instructor in graduate AV courses at Glassboro, Trenton State College, Syracuse, Southern California, and Kent State. Member DAVI Buildings and Equipment Committee, Radio and Recordings Committee, Legislative Committee; member planning committee for DAVI Regional Conference Albany 1956 and Boston 1957; host Regional Conference New Jersey 1958; equipment editor AVI. Member NEA, ASCD, AASA and New Jersey Education Association; member, executive committees, New Jersey AV Education Association and AV Leadership Council; past president ACSSAVO and New Jersey Leadership Council; member Audio-Visual Commission on Public Information since its inception; contributor to professional journals; winner EBF AV scholarships, 1947 and 1948.

LIND, Edith M., director, audiovisual department, Seattle public schools, 1948 to date; consultant, radio workshop and audio education, 1947-48; teacher at demonstration school, 1943-47; elementary-school teacher, 1927-43 (all Seattle); assistant instructor, AV course, University of Washington summer session, 1951. Life certificate, State Teachers College, Cheney, Wash., 1925; B.A. (1943) and M.Ed. (1955) University of Washing-

(Turn to the next page)

McPherson

Tiemann

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Cochran

King

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Skelly

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ton. Co-Chairman National Program Committee 1959 DAVI Convention; DAVI Television Committee, 1955-58; AVI Editorial Board, 1957 to date. Member Washington DAVI board of directors, 1955-58; past president, Seattle Film Council; contributor to *Elementary English, Text-Film News, Washington Education;* Pi Lambda Theta and Delta Kappa Gamma.

McKAY, Jack H., coordinator of instructional materials, Corpus Christi (Texas) public schools, 1954 to date; director AV center, University of Notre Dame, 1952-54; AV supervisor El Paso public schools, 1948-52; chemist Shell Oil Company, Alameda Station (Calif.) 1945-48; civilian instructor, Army Air Forces, Hondo, Texas, 1942-45; elementary teacher, and junior high school principal in Texas schools, 1933-42. Visiting professor University of Florida, summers 1954-57; extension instructor, Texas Western College, 1949-51. B.A. Hardin-Simmons University, 1932; M.A. Texas Western College, 1951. Member, DAVI Executive Committee and DAVI Board of Directors as Texas representative, 1959-60. President Texas AV Education Association; member, TEXAVED board of directors, 1955 to date.

McMAHAN, Marie, AV consultant, Battle Creek (Mich.) public schools, 1949 to date; assistant in visual aids, 1945-49 and elementary teacher 1940-45 (Battle Creek); lecturer in education, University of Michigan, summers 1955, 1956, 1958, extension division, 1956-57 and 1957-58; instructor, Western Michigan University, summer 1959; instructor Clear Lake Workshop (Battle Creek public schools and University of Michigan) most summers since 1950. B.S. Western Michigan University, 1940; M.A. University of Michigan, 1953. Member DAVI Board of Directors, 1955-56 (as MAVA president); ASCD-DAVI Ad Hoc Committee, 1957-59; AVI Editorial Board, 1957-58. Past president, past vice president of Michigan Audio-Visual Association; former member MAVA executive committee; member Instructional Materials Committee, Michigan Department of Public Instruction 1945-55 and chairman 1953-54; member AV Committee, National Council for the Social Studies, 1956-57; member NEA and state and local education associations; member Michigan Reading Association; editor 1956 MAVA Yearbook; editor *Audio-Visual Ideas—Let's Try Them* (Battle Creek public schools).

MEIERHENRY, Wesley C., professor of education, University of Nebraska, 1946 to date; director, advanced professional division, Teachers College, University of Nebraska (advisor to advanced students specializing in AV), 1958 to date; assistant director, extension division, San Jose State College, summers 1950-51 and University of Nebraska, summers 1944-50; teacher and superintendent of schools, Republican City (Nebr.) 1936-43. B.S. Midland College, Fremont, Nebr., 1936; M.A. (1941) and Ph.D. (1946) University of Nebraska. Chairman DAVI Research Committee; member, AVCR editorial board; consultant, DAVI Field Service Program; participant Lake Okoboji Conference, 1955, 1959; chairman 1959 committee to direct special grant to DAVI Research Committee. Consultant to U.S. Office of Education on Title VII; officer in Nebraska State AV Association since its organization; director, Nebraska Program of Educational Enrichment Through Use of Motion Pictures, 1946-50; author *Enriching the Curriculum Through Motion Pictures* (University of Nebraska Press 1952).

SKELLY, Harry J., chief, bureau of audiovisual and school library education, California State Department of Education, 1958 to date; consultant in audiovisual education, California State Department, 1948-58; AV supervisor, Madera County Schools, 1937-48; officer in charge training aids section, U.S. Navy, 4th Naval District, 1942-45; teacher and elementary school principal, 1931-37. A.B. Chico State College, 1931; M.Ed. Oregon State College, 1941; Ed.D. Stanford University, 1956. Member, AV Editorial Board. Member, NEA, ASCD, Audio-Visual Education Association of California, California School Supervisor's Association; member, Governor of California's Citizens Advisory Committee on Educational Television; contributor to professional journals; Phi Delta Kappa.

VANDERMEER, A. W., associate dean, College of Education, Pennsylvania State University, 1956 to date; professor of education, Penn State, 1946 to date; U.S. Navy, 1943-46; graduate study, University of Chicago, 1939-43; research fellow in educational motion pictures, American Council on Education, 1940; science teacher and AV director, Toppenish (Washington) public schools, 1934-39. B.A. Eastern Washington College, 1934; University of Washington, 1939; M.A. (1941) and Ph.D. (1943) University of Chicago. Certified to teach chemistry, general science, social studies, English, geography. Member, DAVI Professional Education Committee, Committee on Evaluation of Secondary Schools, other DAVI committees; active in accreditation programs, representing DAVI in joint projects with TEPS and AACTE. Member, NEA, Sigma XI, PENNAVID, PAVATE. Author *Principles of Audio-Visual Instruction* (McGraw-Hill 1960). Numerous research studies in AV instructional materials; articles in professional journals; presently engaged in research on improvement of informational moving pictures and filmstrips under Title VII.

New Goal Set for Helen Rachford Fund

Mrs. Margaret W. Divizia, chairman of the Fund Committee, has announced a new goal for the Helen Rachford Audio-Visual Scholarship Fund—$7000 by the time of the Miami Convention in 1961. The Committee plans to have $10,000 in the bank and drawing interest for scholarships by mid-1961. The Fund now holds approximately $3600, with the first scholarships to be awarded from the principal for the fall of 1960. The ultimate goal is $25,000 by 1965 which would provide enough money from interest alone for two or three scholarships per year.

Here are fund-raising activities suggested by the Committee:

1. Asking state, regional, and local associations to place a surcharge of 50 cents on conference banquets and luncheons during the period of the drive.

2. Asking exhibitors at state and local conferences to add $1 to the charge for booth space.

3. Requesting that NAVA add a charge to its exhibitor's fee for the 1960 and 1961 annual conventions.

4. Urging state and local associations (professional and commercial) to raise money through raffles, door prizes, etc.

5. Continued appeals by the Committee to individuals via mail and personal contact.

Mrs. Rachford was killed in an airplane crash enroute to the 1958 DAVI Convention in Minneapolis where she was to take office as DAVI vice president. A pioneer in the audiovisual field, she was AV director for Los Angeles County at the time of her death. The purpose of the Fund created in her memory is to advance the audiovisual field by providing outstanding students an opportunity to pursue graduate study in audiovisual education through scholarship and research grants.

Other members of the Fund Committee are Paul Cox, executive vice president of Classroom Film Distributors; and James D. Finn.

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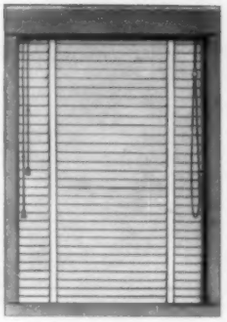

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Film Parade—The World Community

by Robert H. Burgert

The Middle East (International Film Bureau, 1 East 42 St., New York 17)

Today the Middle East is a region of unrest. It is subject to the historic rivalries and animosities of the past, the vigorous nationalism of this mid-century, and the economic forces that are transplanting many of its people from a nomadic or agrarian life to a highly competitive industrial and commercial society. Julien Bryan, through photographs and simplified animation, traces the various civilizations and religions that have left their imprint on these people. He has portrayed the impact of oil, the development of cities and a commercial class of people, and has shown the relationship of the student agitator groups to political and economic affairs. The secondary teacher and student will find this film an excellent source of background information and a basis for an intelligent discussion of these lands, their people and problems. (1200 ft, color)

Northern Island (International Film Bureau)

This beautiful film presents in detail the basic agricultural resources and the industries upon which the economy of this section of Ireland is based. Emphasized are the flax and linen factories, dairy product processing, fishing, shipbuilding, and cattle raising. Excellent process shots are employed to document these concepts. (600 ft, color)

A Family of Lisbon, Portugal (Frith Films, 1816 N. Highland Ave., Hollywood.)

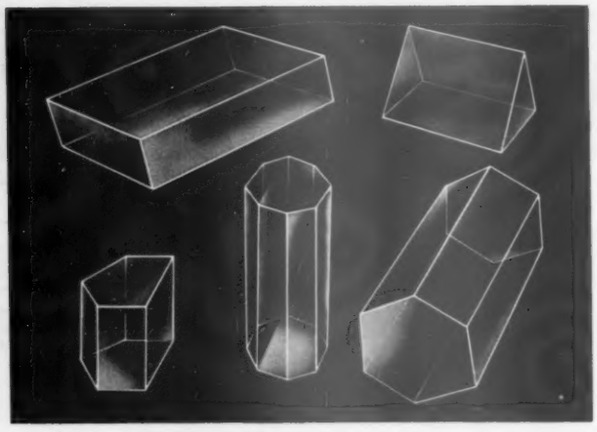
Lisbon, a city built on seven hills, abounds in historic landmarks. Life along the waterfront emphasizes the importance of fishing. A visit to a family stresses the importance of the home, its garden, birds, etc. Life in the outdoor patio, at the market, and Sunday activities in the city's park give one an insight into the daily life of a family in Lisbon. (600 ft, color, $130)

A Family of Amsterdam (Frith Films)

Situated on islands, Amsterdam is a city of modern shops, hotels, and apartments. The Nicholas family live in an apartment house. The children attend a modern school. The family shops in open-air markets and takes an active interest in a variety of sports. A trip by bicycle into the countryside gives one a glimpse of the dairy industry, flower nurseries, canal transportation, and the land reclamation program. A colorful cross section of life in the Netherlands. (600 ft, color, $130)

Islands of the South Pacific (Arthur Barr Productions, 1265 Bresee Ave., Pasadena 7)

This is much more than a travelogue. The various types of islands and their geologic origins are explained. Migration of different racial groups has influenced their cultural development and ways of living. Climate also is an important factor in determining the life patterns and economy of these islands and their people. Emphasized



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III. SURFACE AREAS OF SOLIDS

Art, animation, and model demonstrations help develop formulas for finding volumes and areas of solids. Live footage shows the use of these formulas in practical situations.

Carefully produced under the supervision of Dr. E. H. C. Hildebrandt of Northwestern University's Department of Mathematics, these films meet the demands of the revitalized mathematics curriculum.

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are the native products, homes, art forms, and religious customs. Some of the history is interpreted. Modern influence such as trade, intermarriage, and the tourist are discussed. A splendid film for an overview and critical analysis of this large section of the South Pacific. Packed with information and excellent photos. (800 ft, color, $150)

Family of Ghana (McGraw-Hill Text film, 330 W. 42nd St., New York 18)

This simple and often naive film is outstanding as a documentary study of native life in Ghana. We see a simple fishing village, meet its people, and find that a conflict exists between the ambitions of the younger men and women and the traditions imposed by their elders. Local problems are settled by a council of the village chiefs. A trip to the capital reveals to a young man the improvements in travel, living quarters, and health services to be found in the city, and how, by a larger and better boat financed by the government, his brother-in-law is able to increase his earnings. A return to the village indicates that new ideas are slowly infiltrating (1600 ft, b-w)

Portrait of the Family (McGraw-Hill)

A survey of British industries, sports, and customs, and the relationships that exist between England and its family of commonwealths. Scotland's shipbuilding industries, Canada's combination of industrial and agricultural development, and Australia's and New Zealand's great potential for future development all add to the solidarity of the empire. South Africa, although engulfed by critical social problems, is playing an increasingly important role as a world economic power. India, a melting pot of races, religions, and political ideas, maintains economic relations with the mother country. Ghana, formerly the Gold Coast, is gaining political experience and economic independence. (1600 ft, b-w)

Face of Red China (McGraw-Hill)

This is the story of 650 million people and the physical and mental regimentation they endure. The film highlights the continuous barrage of propaganda, the "re-education" of political prisoners, and the efforts made to improve agricultural output. Reel two shows the influence of Communism on city life, the emphasis placed on human labor, and the socialization of workers' homes, hospitals, and schools. For the serious student of comparative government or world economics. (2400 ft, 2 reels, b-w)

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Interaction Pamphlet

(Continued from page 271)

large groups, medium-size discussion groups, small seminars, instruction via television, opportunities for peer group interaction under student leaders, and opportunities for independent library study. The particular method would, of course, have to be appropriate to the subject matter and to the degree of student maturity.

The NEA's Division of Audio-Visual Instructional Services has made a commendable beginning by sponsoring and reporting this seminar on the subject of interaction. It might be equally fruitful to follow up with similar concentrated studies of the topics of student *motivation* and *reward* and their relation to teaching and learning via instructional television.

Programming for TV

HOW CAN WE MAKE SENSE out of educational television? How can we understand and assess its development adequately toward the exercise of more effective leadership in relation to it?

What distinctions should we make if we are to become more discriminating in our uses of television in our instructional programs?

What guidelines should be established to improve the type and quality of opportunities offered on television as learning resources?

What new types of programs should be designed to stimulate critical thinking on the part of learners?

In what ways can teachers make more effective use of television in their classrooms?

How can television be used effectively to improve, enhance, and expedite learning?

What are television's unique contributions to learning? What learning experiences are appropriate for educational television?

What is meant by a television "task force"?

What generalizations can be made regarding current inschool telecasts now on the air?

These questions will be dealt with in NEA's newest television publication due off the press in December: *Guidelines for the Improvement of Televised Learning Situations*. A result of NEA's third television seminar held in Washington on May 16-18, the publication is built around the general topic, "How can we program effectively for learning on television?" Alexander Frazier, director of the University School and

Center for School Experimentation at Ohio State University, served as chairman; Harold Wigren, as coordinator.

Unlike its two predecessors, this seminar put a premium on creativity and individual expression by participants rather than on group work. Each participant was encouraged to freewheel as he wished in order to extend his thinking in an area inspired by the conference discussions. The publication, consisting of signed articles by various seminar participants, will deal with the questions raised at the beginning of this article.

Among the contributors are Harold Drummond, professor of elementary education, George Peabody College for Teachers, Nashville; Martha A. Gable, director of radio and television education, Philadelphia public schools; Samuel Becker, State University of Iowa, Iowa City; Arthur J. Lewis, assistant superintendent in charge of elementary education, Minneapolis public schools; Vernon Bronson, director of radio and television education, Dade County public schools, Miami; Helen Seel, supervisor of radio and television, Cincinnati public schools; Gale R. Adkins, director of radio-television research, University of Kansas; Walter R. Brown, assistant professor, School of Education, Florida State University; Lois Edinger, studio teacher, North Carolina In-School Television Project, Chapel Hill; Chester D. Babcock, Seattle Public Schools; Richard D. Batchelder, president, NEA Classroom Teachers; Dorothy Klock, New York City Board of Education; and Alexander Frazier.

The publication will sell for $1. Write to the DAVI national office after December 1.—HAROLD WIGREN

College ETV

College Teaching by Television is a 234-page report of a conference sponsored jointly by the Committee on Television of the American Council on Education and the Pennsylvania State University. Available from the Council at 1785 Massachusetts Avenue, N. W., Washington 6, D. C. Price, $4.

(See page 280 for other reviews)

SHARE THE BEST

Don't forget to submit a short sketch (500 words or less) for AVI's March issue if you have a promising practice to share—perhaps to save money, help the teacher utilize AV, improve production, facilitate selection of materials, overcome handicaps in old buildings, or use materials in a unique way. Deadline, January 1.

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Dr. Theodore Huebener
New York City Schools

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Lasting Importance Predicted for Ford Report

MOST PUBLICATIONS about television and education are out of date and of little value soon after they are off the press. However, a few do mark the status of the tool and the problem at a given time, and these will always be important publications. *Teaching by Television* falls in the second category. When later histories of educational television are written its May 1959 publication date may well be a dividing line.

This report of somewhat less than 100 pages is available free from the Ford Foundation, Office of Reports, 477 Madison Avenue, New York 22. It attempts to present reliable answers to the questions about direct instruction by television that haunt every educator in the country. Its concern is not to sell TV but to insure a better education for the nation's young people in the face of rapidly rising enrollments, increased amount and complexity of knowledge, and a serious shortage of able teachers.

Some of the questions treated by the Fund's research in ETV are: value and importance of the "front-row" seat effect; value of traditional testing methods as applied to ETV; the team approach to television instruction; student responsibility in learning; economic feasibility of small classes; effect of TV teaching on lesson preparation; design of educational spaces; scheduling problems; arousing teacher interest; feedback; length of presentation time; small and large group discussion; ETV and the interdisciplinary approach; home viewing and the college program; importance of state and regional networks; relative merits of open and closed circuit; and whether or not studio teachers should teach to the camera or to a studio class.

It is obviously difficult for an organization that has devoted so much time, effort and money to the study and promotion of ETV to present an unbiased summary. However, the Fund's conclusion that ETV is one of the most promising tools for attacking the major problems of education at the present time seems amply justified.

—RAYMOND WYMAN

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Carolina Report Useful

A new publication which has just arrived on my desk seems to me, on first reading, to be one of the most helpful thus far from the Fund for the Advancement of Education. *The National Program in the Use of Television in the Public Schools* is a report on a national workshop held at Chapel Hill, North Carolina, June 15-26. Its 45 pages include: (1) findings that have emerged from the national program thus far, (2) criteria for judging telecasts, (3) discussion of characteristics and training of studio teachers, (4) relationship of studio teachers to classroom teachers, (5) suggestions for classroom follow-up, (6) needed facilities, and (7) suggestions for preparing teachers both to teach on TV and to utilize telecasts.

For copies write to the Fund at 477 Madison Ave., New York 22.

—A.L.H.

Science Film Group

An *ad hoc* committee to organize the American Science Film Association was announced late last summer by Randall M. Whaley, chairman of the committee, and associate dean of the School of Science, Education, and Humanities at Purdue University. Dr. Whaley said that a major objective of the Association will probably be to encourage the use of films both in science education and in facilitating communication of technical information within the scientific community.

Other members of the organizing committee are: A. B. Garrett, Ohio State University, vice chairman; Carl Allendoerfer, University of Washington, vice chairman; Don Williams, University of Kansas City, treasurer; and Robert E. Green, National Academy of Sciences—National Research Council, secretary. Committee members affiliated with government and private enterprise are John Flory, O. S. Knudsen, Richard H. Orr, Daniel Rochford, Edwin W. Roedder, H. Burr Roney, Robert Wagner, and Willard Webb.

Notes from the Field

PLANS ARE underway for the Second American Film Festival to be sponsored by EFLA at the Barbizon Plaza in New York City, April 20-23. The change in hotel site promises improved screening facilities, according to the *EFLA Bulletin*.

• • •

THE New York State Audio-Visual Council has scheduled its annual winter meeting for December 10-12 at the Hotel Syracuse in Syracuse, N. Y.

OUTDOOR DEDICATION ceremonies for the new college library and curriculum materials center at Newark State College took place on the college campus at Union, N. J., September 30. John O'Meara is the newly appointed materials consultant for the College.

• • •

EIGHT WORK SESSIONS will carry out a "practical issues" theme when the Audio-Visual Education Association of California meets for its annual conference in Santa Rosa January 28-30. Areas covered will be language laboratories, local production, sponsored materials, NDEA, instructional television, and administrative policies. Clarence Spencer, vice president of the State Association, is general chairman with John E. Fetz, president of the Bay Section Association, as co-chairman.

• • •

DONALD SCOTT, who received his Ph.D. from the University of Wisconsin last January is on the administrative staff of the Neenah (Wisconsin) public schools as its first curriculum coordinator. He is also responsible for the audio-visual program throughout the school system.

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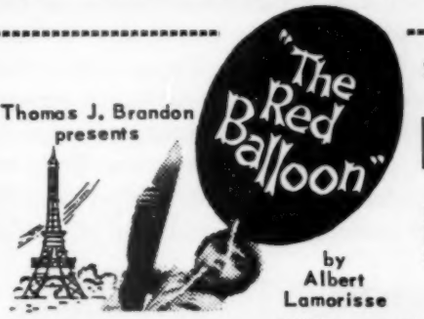

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The *1960 Educational Motion Pictures Catalog* of the Indiana University Audio-Visual Center is off the press with a listing of some 6000 films of cultural, social, and educational value. The 644-page publication is an index to the 16mm films in the University film library. Titles range from those suitable for levels from nursery school through college and including adult education. Distribution of the 10,000 copies of the catalog is underway to regular users of the film library's services throughout the U. S. and in foreign countries. Others wanting a copy may write to: Circulation Department, Audio-Visual Center, Indiana University, Bloomington.

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Here are three choices from the United Nations Bookshelf published in the *Information Bulletin* of the United States Committee for the United Nations. All three are available from the Committee at 375 Park Avenue, New York 22.

Three Promises to You, by Leaf Munro, J. B. Lippincott, Philadelphia. 1957, 48 p., $2. A picture book about the UN for younger children.

United Nations Photography Display Set. 1959. Sixteen 14" x 20" black and white photographic posters illustrating the work of the UN. Excellent for display. $1.25.

The United Nations, National Cash Register Company, Main & K Streets, Dayton 9, Ohio. 1958, 65 p., one copy free. An exposition of the UN containing full color flags, maps, basic facts on countries.

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The 1959 *Elementary Teachers Guide to Free Curriculum Materials* is on sale from Educators Progress Service, Randolph, Wis., for $6.50.

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The Cancer Challenge to Youth is a filmstrip produced by the American Cancer Society with assistance from a committee appointed by the National Science Teachers Association. It is free from your ACS local unit or nearest division office. The filmstrip kit contains 65 frames in color, a 7-inch disc recording (15 minutes), and a 20-page teacher's guide. Designed for high school students, it presents a basic introduction to the subject of cancer; the nature of normal and abnormal cells; facts about the nature, causes, and treatment of cancer; some areas of cancer research and the progress being made; and what can be done for individual protection.

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Write to Protestant Church Buildings and Equipment, 27 East 39th Street, New York 16, for *Protestant Church Americana*, an attractive 8-page visualized report on AV equipment in Protestant churches. The information is based on a survey by Audience Analysts, Inc., Bala-Cynwyd, Pa.

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Free to DAVI members on a first-come, first-served basis — a few hundred copies of *Materials List for Use by Teachers of Modern Foreign Languages*. This 85-page publication was prepared and published by the Modern Language Association under a Title VII contract. Copies are on sale for 50 cents each from the Foreign Language Program Research Center, Modern Language Association, 70 Fifth Avenue, New York 11.

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A classified directory of AV personnel in colleges and universities of the United States was published this summer by DAVI. The Directory was compiled by a sub-committee of the College and University Section with Eugene Oxhandler as chairman and Carlton Erickson, Walter Felty, Richard R. Shurtz, Leonard Bathurst, Otis McBride, James Page, and E. Milton Grassell serving as members. 115 page mimeo, $1 from the DAVI national office.

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Inquire at your local Coca-Cola Bottling Company for the Elementary Science Laboratory, underwritten by Coca-Cola and prepared by Bro-Dart Industries in cooperation with educators. This kit evoked favorable comment when it was exhibited at the DAVI Convention in Seattle and those of you who missed it then will have a second chance to examine it in Cincinnati. It contains cardboard models which illustrate scientific principles relating to: (1) earth and space, (2) communication by sound and light, (3) weather, (4) magnetism and electricity, (5) living things, and (6) machines. Each kit has material for 36 models, six for each of the foregoing categories. The models (which include take-home models for pupils) are printed in four colors, accompanied by detailed instruction sheets, summary leaflets for pupils, and teachers guides. Distributed only through Coca-Cola Bottling Companies.

editorial/ANNA L. HYER

Setting the Proper Keystone

WHAT AREA OF STUDY is most basic to the professional education of the audiovisual director, that is, what area furnishes the most vital foundation on which to build his AV courses? This may seem like a purely academic question. But it is not academic to the training program director, who of necessity has made this decision. He has decided what he believes to be the undergirding areas of study and has assigned relative values to each.

Nor is it an academic question for you who are in the field. You are in an excellent spot to evaluate your own experience, to judge what portions of your formal education have been of most value to you, and in what areas your preparation was weak in assisting you to meet successfully your day-by-day responsibilities.

For a good many years we in the audiovisual field have considered curriculum as the foundation on which the audiovisual discipline is built. We reaffirmed this position in 1955 when DAVI adopted a recommendation that AV specialists be required to show certain graduate credits in "audiovisual education and curriculum." Our convention planning committees frequently develop themes and programs emphasizing the closeness of AV and the curriculum. AUDIOVISUAL INSTRUCTION almost every year features in one issue some aspect of the same theme.

Recently I have begun to question our basic assumption, but it was a conversation with one of our national leaders that started me thinking critically about what I really did believe. My visitor stated that he thought the AV director's most important role was as "implementer of planned change," or in the terminology of the day, as a "change agent." Hence he felt that the foundation for the AV field lay in those portions of the social sciences (psychology, sociology, anthropology) having to do with theories of social change and the use of these theories to change society.

I would like to suggest that the foundation of our discipline is in the psychology of learning. We need basically, I believe, to know more about learning principles, the conditions affecting learning, and about variations in the ways individuals of all ages learn. We need to know about learning in group situations, large and small, and about the role of various kinds of materials in the learning process—particularly in relation to the achievement of various types of educational goals. We need to know about perception and learning.

Three Role Concepts

Several other viewpoints could no doubt be presented but it will serve my purpose to confine the discussion to these three views of the AV director, which for convenience I will dub "curriculum agent," "change agent," and "learning agent." Each of these carries with it a concept of what we believe our job to be. Perhaps even an oversimplified sketch of what each means in practice will be useful to clarify what I mean.

Curriculum Agent: The most important role of this AV director is as curriculum implementer. He is an active participant in curriculum planning; he is aware of the scope and sequence of experience offered in the school system; he makes available to teachers AV experiences which correlate with the curriculum.

Change Agent: His important role is as an implementer of change. He considers himself an administrator or supervisor. He believes he and his staff can never do the AV job; therefore, his role is to change the behavior of others (teachers, administrators, supervisors, lay leaders) so that they will themselves become good users of AV, or, as in the case of the latter, supporters of AV utilization. His interests are in human relations, staff relationships, and in his own role as leader.

Learning Agent: The most important role of this AV director is in stimulating the use of AV resources to improve learning. He diagnoses learning problems and is able to suggest improved materials and utilization techniques to reach the desired learning goals. He evaluates new technological developments in terms of their probable effects on learning.

I know what you are saying—"An AV director should be all three." And wouldn't it be wonderful if he were! The time which a student can spend in studying foundation areas is limited, however, and choices must be made. What things can he learn after he is on the job? To what extent can leadership be improved through courses and to what extent is it a fairly fixed personality characteristic of a graduate student? What is the job of the AV director all about anyway? What is his unique role in the school team working towards improved instruction.

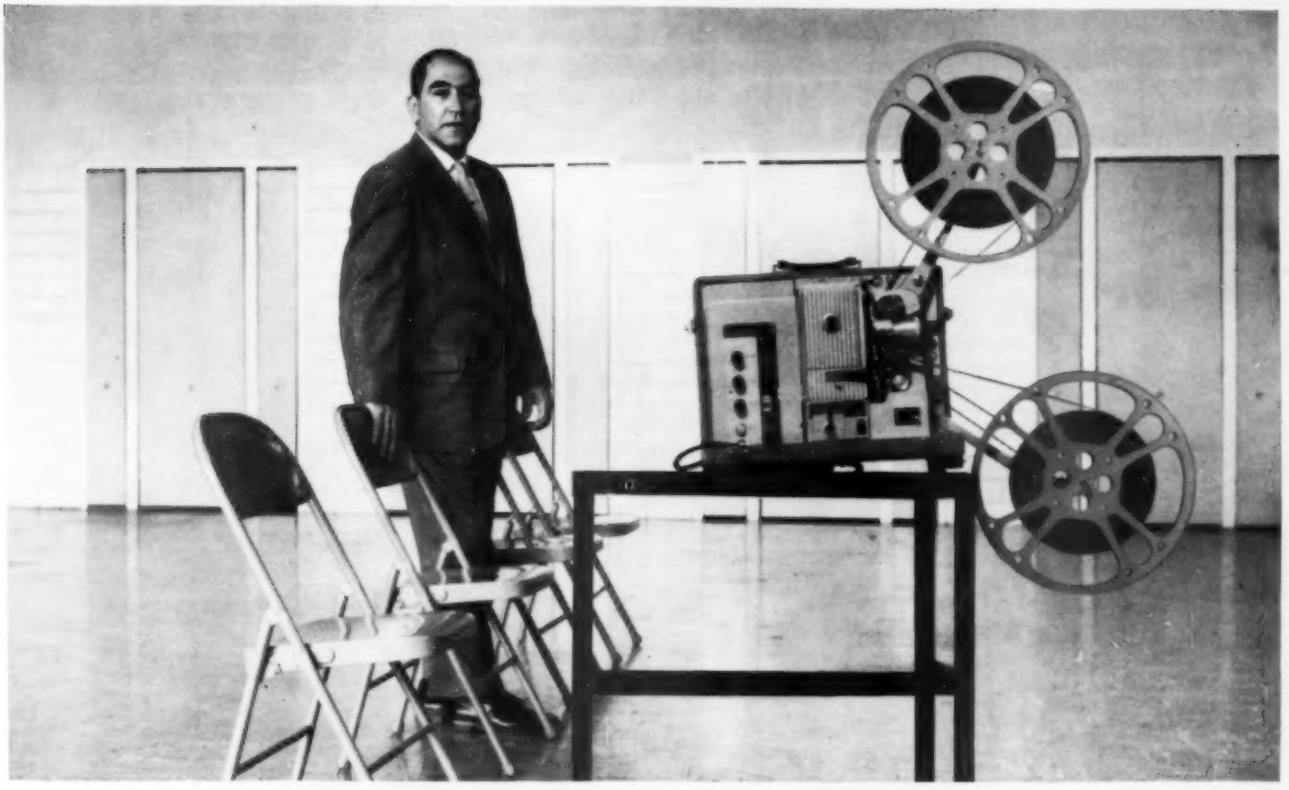
Or, you may be saying that the roles of the change agent and learning agent are part of the curriculum agent's role. Indeed they are. Curriculum as it is taught, however, tends to deal largely with problems of scope, sequence and time, although we continue to define curriculum as all the experiences offered to children under the supervision of the school. The definition, it seems to me, is too generalized to be useful in problem-solving situations. It is like believing in God, the flag, and motherhood.

No Answers Here

I am not capable of giving answers, nor will I attempt to do so here. I have been raising questions about training programs for only one AV job of the many in education, business, government, and religion. The same types of questions should be asked about the others. I hope I have started you thinking. Because of the shortage of personnel in this field many new training programs are going to be established in the next few years.

For those of you now enrolled in professional programs, don't be alarmed! Nothing you study will be useless. At least this has been my experience, and daily I am confronted with additional areas in which I should be informed. This is at the same time one of the challenging and frustrating aspects of the audiovisual field.

At the new Orchard Hill Elementary School, Leetonia, Ohio, selected by A.A.S.A. for its exhibit of outstanding school designs, George Trombitas, Assistant Principal, says:



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